# SCENARIO NOTE

## Meeting between
## Deputy Minister of Infrastructure and Communities and the
## Auditor General of Canada

| | |
|---|---|
| **Date/Time:** | Tuesday, September 19, 2017 – 3:30-4:30p.m |
| **Location:** | Deputy's Minister's Office<br>427 Laurier Ave W., 10-026 |
| **Subject:** | Infrastructure's New Programs for Phase II |
| **Participants:** | Mr. Michael Ferguson, Auditor General (AG)<br>Ms. Nancy Cheng, Assistant Auditor General (to be confirmed)<br>Ms. Lucie Talbot, Director, Auditor General of Canada<br>Mr. Jean-François Tremblay, Deputy Minister of Infrastructure and Communities<br>Mr. Marc Fortin, Assistant Deputy Minister, Program Operations<br>Ms. Isabelle Trépanier, Chief Audit and Evaluation Executive |

## Departmental Objectives

The objective of this meeting is to discuss INFC's new Phase II – *Investing In Canada* programs and to ensure the Auditor General (AG) of INFC's controls and due diligence in managing these funding programs (See **Annex 3**).

## Stakeholder Objectives

It is expected that Mr. Ferguson's objectives for the meeting are to seek updates on progress on Budget 2016 investments, receive details of Budget 2017 investments, and may discuss his office's list of prospective audits involving Infrastructure Canada in coming years.

## Context/Overview

The AG is committed to serving Parliament as effectively as possible by providing fact-based information that should contribute to an effective public service and a government that is accountable to Parliament and Canadians. The AG appointed the Commissioner of the Environment and Sustainable Development (CESD), Julie Gelfand, in March 2014. The CESD conducts performance audits and is responsible for auditing the federal government's management of environmental and sustainable development issues.

The CESD Fall 2017 report is to be tabled in the House on October 3rd. There is one audit chapter including Infrastructure Canada (INFC):

- Audit of Adapting to the Impacts of Climate Change: The audit examined whether Environment and Climate Change Canada (ECCC), in collaboration with other federal partners, has taken appropriate action to address the federal government's adaptation to the impacts of climate change and to determine

1

whether selected departments have taken appropriate measures to adapt to climate change impacts in their areas of responsibility.

- Overall, the audit found that ECCC had not provided sufficient direction to other federal organizations to achieve federal adaptation goals. ECCC had not developed an action plan that provided clear direction to departments and agencies on how to implement the Framework. As a result, few departments had assessed their climate change risks, leading to vulnerabilities and an inability to measure resiliency or set priorities based on evidence.
- INFC was included in one recommendation (See **Annex 2**), relating to the need for departments to fully identify, assess, prioritize and address climate change risks related to their areas of responsibility. Eleven of the 19 departments and agencies audited were also included in this recommendation. All departments agreed with the recommendation.

Currently, INFC is involved in five (5) ongoing OAG/CESD engagements. The CESD Audit of Adapting to the Impacts of Climate Change (as discussed above); the ongoing OAG Audit of the Construction of the New Champlain Bridge (soon entering its Reporting Phase); the OAG Audit of Disposal of Crown Assets (INFC will soon be completing a survey); the OAG Audit of Connectivity in Rural Areas (INFC will receive third party reference); and the annual Public Accounts exercise (nearing completion for FY16/17).

With respect to the Budget 2016 contribution programs, two just-in-time internal audits have been done. The first examined the approval processes for the contribution agreement and the projects, and the second looked at governance. The audits were largely positive, although the governance audit identified challenges with respect to reporting. These will be further examined in the third audit, which will focus and reporting and payment processes, later this year. Annex 3 presents an overview and results of the audits, often which aligned with lessons learned from past OAG audits and the letter from the AG to the Treasury Board Secretary.

On the topic of INFC's new *Investing Canada Program (ICIP),* Budget 2017 announced an additional $81.2 billion in investments in public infrastructure to support sustainable and inclusive communities, while driving economic growth. A key element of the Plan is $33 billion in funding managed by INFC and delivered through bilateral agreements between the federal government and each of the provinces and territories.

The Minister of Infrastructure and Communities sent a letter to all his PT counterparts in June. The letter provided basic details on the program and outlined the goal of concluding negotiations by March 2018.

Over the course of the summer, officials at all levels (DG to DM) engaged PTs in discussions on the program.

## Points to Register

*Auditor General Role & Engagements at Infrastructure Canada*

I appreciate the role of the Auditor General and the Commissioner of the Environment and Sustainable Development in providing independent analysis and recommendations.

The OAG Principals responsible for Infrastructure presented the results of their Strategic Audit Planning exercise as well as provided an update on the Construction of the New Champlain Bridge engagement at our July Departmental Audit Committee (DAC) meeting. Our external DAC members were very pleased with the candid and open discussion that took place. We would like to see INFC and the OAG continue its good working relations, further collaborate where possible, and we are committed to support your office in conducting future audits of our infrastructure funds.

*Budget 2016 Programming – Public Transit Infrastructure Fund and Clean Water and Wastewater Fund (PTIF/CWWF)*

As we discussed when we last met, the management control framework put in place for our two key programs, PTIF and CWWF, took into account the advice you provided to the President of the Treasury Board last year, as well as lessons learned from previous audits. For example, we have developed a more rigorous approach to performance measurement. We are also being more transparent with Canadians on the progress achieved in each province and territory (PT) through our web site. With respect to horizontal oversight, the Minister of Infrastructure and Communities is the federal lead, and ministerial and deputy minister committees have been created.

Two just-in-time internal audits done so far have helped the department to address gaps as they arose. The audit on governance noted the benefits of having both an internal working level committee to ensure consistent implementation and to resolve issues quickly, and also having regular discussions with PTs at senior levels. One key challenge that remains is the timeliness of financial and progress reporting, including attestations.

*Investing Canada Infrastructure Program (ICIP)*

Similar to our previous programs, the ICIP will be delivered through agreements between INFC and PTs, as the eligible recipients. We do have several new features in the program that will help support, accountability and will promote an effective program roll out.

First of all, PTs will be required to submit an Infrastructure Plan, which is to cover at minimum 3-years, to provide information on how federal infrastructure funding will be invested. The plans will also serve as a tool to monitor how projects contribute towards program outcomes and negotiated targets. We will require that the plan be updated annually.

Second, we will work with colleagues in other federal departments to review projects based on their expertise and knowledge. We will also establish an External Review Committee (ERC) whose members will be external to the federal public service. This Committee will have a primary role of providing the Deputy Minister with the assurance that the appropriate level of due diligence is performed on all projects.

Third, we are building in enhanced program controls, particularly on reporting. We will establish reporting requirements in the IBA which will include a requirement for PTs to report on progress towards achieving outcomes and targets.

On audit, we will continue our practice of undertaking recipient audits. We will work with our colleagues in the PTs to determine the scope of these and work will be done by auditors engaged by INFC. Also, PTs will be required to inform us of any audit that has been performed on the use of the ICIP funds and provide us audit results. We will reserve the right to perform any audit at our discretion if such a need arises.

Finally, consistent with previous programs we will put in place an Oversight Committee for each province and territory, which will be responsible for the monitoring of, and compliance with the IBA requirements. It will be co-chaired by federal and provincial/territorial officials.

*Performance Measurement and INFC Data and Research Strategy (DRS)*

As you know, our government is committed to improving performance data in order to demonstrate clear results of our initiatives to Canadians. Further to our discussion from 2016 on our work with Statistics Canada to improve the availability of data on public infrastructure, our new Data and Research Strategy (DRS), will provide INFC with the information and tools needed to develop evidence-based policy, to support performance measures and results reporting, and provide data and information on the long-term impacts of investments. This information is needed to address the recurrent data gap on public infrastructure in Canada.

3

The DRS will be delivered through the use of different tools, including contracts and agreements, as well as grants and contributions. The DRS funding will be directed toward data development initiatives and implementation of strategic research with other federal government departments, including Statistics Canada, as well as external entities.

Included under the DRS is the first ever national infrastructure survey. Canada's Core Public Infrastructure Survey (CCPI), has been developed in partnership with Statistics Canada. The aim of the survey is to collect a baseline of data to provide a national picture on the state and performance of Infrastructure. The main survey was launched the week of July 24th 2017, and a separate survey for First Nations on-reserve was launched the week of September 11th 2017.

We are continuing to work closely with our colleagues managing other components of our plan to ensure that all our objectives, with respect to investing in Indigenous Communities, social and green infrastructure will be achieved, and we deliver on our plan.
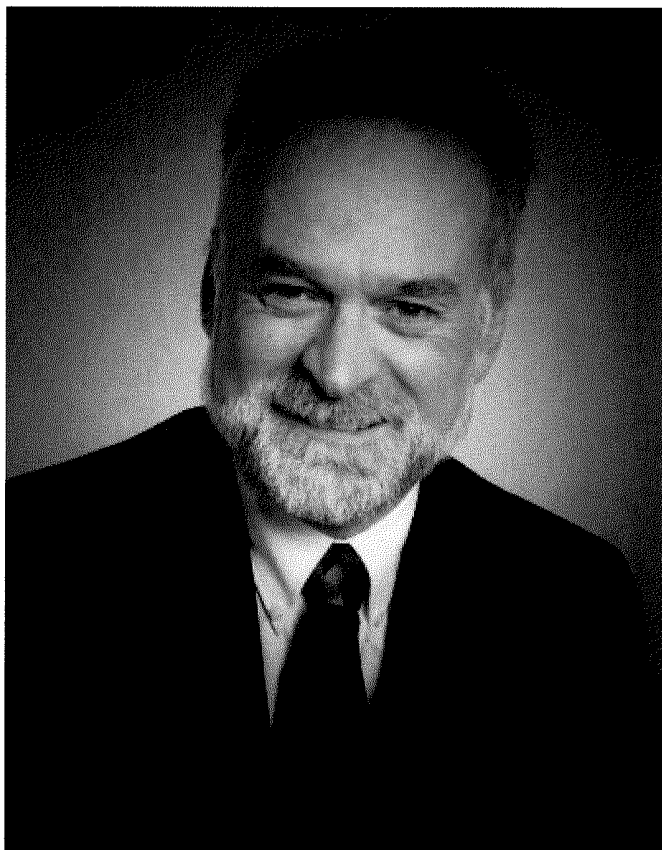
**Annexes**

Biographies of Participants
CESD Audit of Adapting to the Impacts of Climate Change – INFC Recommendation & Response
OAG Audit of EAP 2011 Themes & INFC Audit Findings

4

# The Auditor General of Canada



**Michael Ferguson,** CPA, CA, FCA (New Brunswick)

Michael Ferguson was appointed Auditor General of Canada in November 2011.

Prior to this appointment, from 2010 to 2011, Mr. Ferguson served as the Deputy Minister of Finance of New Brunswick and Secretary to the Board of Management for the Province of New Brunswick.

Mr. Ferguson held the position of Comptroller for the province of New Brunswick from 2000 to 2005. He was also Auditor General of New Brunswick from 2005 to 2010.

He is a past president of the New Brunswick Institute of Chartered Accountants and is currently serving his second three-year term as a member of the Public Sector Accounting Board. Mr. Ferguson was elected to the Fellowship of the New Brunswick Institute of Chartered Accountants in 2011.

**Nancy Cheng,** FCPA, FCA

Nancy Cheng was appointed as an Assistant Auditor General at the Office of the Auditor General in 2003.

As Assistant Auditor General, she is responsible for performance audits of a portfolio of various departments and agencies. This includes audits focusing on the central agencies; finance and revenue; industry and economic development; science and technology; public safety; law and order; foreign affairs, immigration, and international/border activities; transportation and agriculture; and government-wide functions such as human resources management, service delivery and information technology, financial management and control, internal audits, and program evaluation.

# CESD's Transmission Draft Chapter (DM Draft) of the
# Performance Audit of Adapting to the Impacts of Climate Change

## Infrastructure Canada's Final Response to Recommendation 73
## August 2017

The following is INFC's response to the recommendation found at paragraph 73, as stated in the CESD's Transmission Draft Chapter.

| Recommendation | Response |
|---|---|
| *73. **Recommendation.** Agriculture and Agri-Foods Canada, Canadian Food Inspection Agency, Environment and Climate Change Canada, Global Affairs Canada, Infrastructure Canada, Innovation, Science and Economic Development Canada, National Defence, Parks Canada, Public Health Agency of Canada, Public Safety Canada, and Public Services and Procurement Canada should identify, assess, prioritize and address the climate change risks related to their areas of responsibility.* | *Infrastructure Canada agrees with the recommendation. Infrastructure Canada is committed to addressing climate change challenges and to working with provincial, territorial, municipal, and indigenous partners on this issue. To this end, it entered into an agreement in 2017 with the Federation of Canadian Municipalities to deliver the Municipalities for Climate Innovations Program, which supports integrating climate change mitigation and adaptation objectives into municipal infrastructure investment planning. The Department will also be entering into integrated bilateral agreements with the provinces and territories to deliver $33 billion in federal infrastructure investments, of which $9.2 billion will support green infrastructure projects including projects to prepare for climate change, and a Climate Lens will be applied more broadly to all funding streams under the agreements to encourage consideration of climate chance in project planning. In addition, the $2 billion Disaster Mitigation and Adaptation Fund will be launched in 2017-18 to provide funding for large-scale infrastructure projects supporting mitigation of natural disasters and extreme weather events and strengthened climate resilience. Finally, with respect to managing its corporate responsibilities, Infrastructure Canada will continue to assess the climate change risk and ensure that assessments are clearly incorporated and documented in ongoing corporate risk management activities, starting in fall 2017.* |

# COMPARISON OF AUDIT FINDINGS & ADVICE TO PTIF/CWWF

| OBJECTIVE | FINDINGS | CONCLUSION/RECOMMENDATION/RESPONSE |
|---|---|---|
| **2015-16 Internal Audit of the PTIF-CWWF (Phase I) Approval Process.**<br><br>This Audit assessed the projects and agreements approval process with respect to:<br>- Compliance to the Terms and Conditions of the Treasury Board (TB) Submission, including the role of the Project Review Panel (PRP);<br>- Compliance with the Management Control Framework, including the Project Review Panel (PRP); and<br>- Program risk management processes/tools. | FINDINGS<br>The Risk Management methodology was obtained in order to assess the project risk. The PRP checklist (section D) showed that risk assessments were completed for all project lists. The PTIF-CWWF SQUAD also tracked each issue discussed and any related decision reached by the Program Implementation Committee, including the date of approval by senior management, through a Word document.<br><br>An insufficient audit trail and mechanism to track when documents (such as signed letters from the Minister to PT Ministers) due to missing dates.<br><br>The documentation included in Webcims (used to track the progress of document approval) was incomplete. | The Audit concluded that the core controls on the agreements' approval process, including project approval, are generally effective. The entire agreement approval process is well documented. The Audit was able to trace the core controls from the Director General's office, through PRP review and recommendation to the final package to the provinces or territories with the Minister's letter, agreement and project lists. Additionally there was clear evidence that the terms and conditions had been met through checklists completed by the analysts with signatures up to the Director General.<br><br>Two opportunities for improvement in the agreement approval process were identified:<br>- INFC should ensure that the Minister's letters to PTs are dated once signed; and<br>- A central repository should be used for all documents related to the agreement approval process.<br><br>MANAGEMENT RESPONSE<br>Management accepted these recommendations and put in place action plans to address them. |
| **2016-17 Internal Audit of the PTIF-CWWF (Phase II) Governance**<br>This audit assessed the governance of the program to ensure that:<br>- Committees are established in a timely manner and in | 1. **Timeliness of Reports** – The audit noted that many of the progress and outcomes reports were received late, past the six-month requirement, or have not been received. As per POB, this could be the result of the project lists and progress reports having the same or overlapping due dates. In this case, the PTs have prioritized the allocation of funds over reporting requirements. PTs also indicated that their internal approval processes created | The Audit and Evaluation Branch (AEB) concluded that the governance and risk management processes and tools in place were generally effective.<br>• Oversight Committees are established and meeting as intended. There are tools and templates in place for reporting. This, together with formal and informal communications, encourages consistency across the regions, although the capacity of smaller communities to provide information remains a risk. |

1

accordance with program Terms and Conditions and Management Control Framework

- Internal governance committees and oversight committees are effective in terms of risk management and issue resolution related to PTIF/CWWF

- Formal and informal discussion and decision making are documented

delays in reporting. Although the competing timelines have weakened reporting to date, it is expected that upcoming reports will be more timely now that most or all projects have been identified. The timeliness of reporting will be critical to fully monitor program success and manage potential risks and issues.

2. **Reporting Detail (Progress Reports)** – Based on a review of progress reports submitted by the sampled provinces, the level of detail supplied across the regions for completing the template is not consistent. Reports that have more information should be considered a best practice because they are easy to understand and are a good example of what effective monitoring and reporting should look like.

3. **Outcomes Reporting** – Performance measurement strategies have been developed for both programs, defining the outputs, outcomes and associated key performance indicators to measure success. The performance indicators were established quickly, as bi-lateral agreements were being negotiated and signed. POB indicated that it is likely that PTs will not be able to provide measurements for some of the smaller municipalities that do not have the capacity to report on the performance indicators. There is a risk that incomplete performance information and inconsistencies between PTs will impede the ability to report on national performance.

4. **PIMS** - Interviews indicated that the PIMS tool is perceived as cumbersome and concerns were raised about the duplication of effort and data integrity. Some of these issues result from business decisions that were made after the IM/IT

- Internal governance provides an effective forum to operate and implement the PTIF and CWWF consistently across the regions and make program-level decisions based on issues and questions raised at committee meetings.
- Documentation is in place to record decisions made.

RECOMMENDATIONS
Three recommendations were made to further improve the governance of the programs, reduce risk and realize efficiencies.

1. The ADM, POB should ensure that federal Co-Chairs of Oversight Committees make sure that future progress and outcomes reporting is timely, complete and sufficiently detailed.

MANAGEMENT RESPONSE
Agreed. Management accepted this recommendation. INFC has been working collaboratively with PTs to clarify the importance of providing timely, accurate and complete reporting. The Federal Co-Chairs of INFC will endeavor to work with his/her PT counterparts to ensure progress and outcomes reporting is timely, complete and sufficiently detailed.

2. For future programs, performance indicators should be established, with input from the provinces and territories, to ensure that data is available and that reporting expectations are aligned throughout the program lifecycle.

MANAGEMENT RESPONSE
Agreed, Management accepted this recommendation. In preparing Phase II of the Investing in Canada plan INFC has consulted extensively with PTs. The Assistant Deputy Minister of the Program Operations Branch established a FPT committee specifically to seek input from PTs on performance indicators and data availability. In finalizing Phase II programs, INFC will ensure program outcomes are aligned with PT expected outcomes for infrastructure investments.

3. Key performance issues with Program Information Management System (PIMS) should be prioritized by Information

| | | |
|---|---|---|
| | consultation with the PTIF-CWWF (SQUAD) Committee, which are now viewed as impractical. For example: <br><br> - PIMS is a system where Analysts record project information that is used for reporting and to manage funding. In order to support project or program data analysis, it is necessary to extract data from PIMS using IBM's Cognos Business Intelligence suite. <br> - Currently, PIMS does not support an upload functionality, and Analysts are unable to copy and paste data from the spreadsheets received from the PTs. Therefore, all information submitted by a PT must be manually entered in PIMS. | Management/Information Technology (IM/IT) and Program Operations Branch (POB) and addressed as soon as possible. Improved communications between the business community and the PIMS SME team would ensure that ongoing investments in the system reflect the specific needs of all programs. As part of ongoing system improvements, lessons learned from programs, including PTIF and CWWF, on the usability and effectiveness of the system should be discussed within the business community and provided as requirements to the PIMS SME team. <br><br> MANAGEMENT RESPONSE <br> Agreed. Management accepts these recommendations. <br> INFC will ensure that ongoing improvements to PIMS are based on continuous discussion with all system users. It must be understood that PIMS is a Financial and project/program management system. PIMS data is stored in a central database (IDW) where reporting is done using IBM Cognos Business Analytics. |

**Acronyms**

EAP – Economic Action Plan

FY – Fiscal Year

ISF – Infrastructure Stimulus Fund

OAG – Office of Auditor General

OC – Oversight Committee

P/T – Province/Territory

PRP – Project Review Panel

PTIF – Public Transit Infrastructure Fund

CWWF – Clean Water-and Wastewater Fund

POB – Program Operations Branch

FPT – Federal-Provincial-Territorial

SQUAD – PTIF-CWWF Committee

3

**SCENARIO NOTE**

**Meeting between
Minister of Infrastructure and Communities and
Representatives of the World Bank Group**

| | |
|---|---|
| **Date/Time:** | September 27, 2017, 4:00 to 4:30 p.m. |
| **Location:** | Centre Block, Room 256-S |
| **Subject:** | Meeting with World Bank Group |
| **Participants:** | <u>Infrastructure and Communities</u><br>• The Honourable Amarjeet Sohi, Minister of Infrastructure and Communities<br>• Ms. Kelly Gillis, Deputy Minister<br>• ██████████████████ to the Minister<br><br><u>World Bank Group</u><br>• Ms. Kristalina Georgieva, Chief Executive Officer<br>• Mr. David William Sharrock, Senior Communications Officer<br>• Mr. Qahir Dhanani, Senior Advisor to the Chief Executive Officer<br>• Ms. Nancy Clifford, External Corporate Relations<br>• Ms. Christine Hogan, Executive Director for Canada, Ireland, and the Caribbean |

**Stakeholder Objectives**

The World Bank and other multilateral development banks are increasingly focused on crowding the private sector into international development, recognizing the limitations of public finance in meeting development objectives and the opportunity for commercial solutions.

**Departmental Objectives**

This meeting will provide an opportunity to further strengthen the existing, positive relationship between Infrastructure Canada (INFC) and the World Bank. This meeting will also be an occasion to discuss World Bank efforts to crowd in private sector participation into global development opportunities.

The World Bank has expressed interest in engaging with the Canadian private sector. This presents an opportunity to discuss Canada's efforts to promote private capital investments in the domestic space, as the Canada Infrastructure Bank is launched.

1

**Context/Overview**

*World Bank Group*

Infrastructure is a major component of the World Bank's work in supporting poverty alleviation. The World Bank Group helps governments design and implement public-private partnerships (P3) in areas such as power, transportation, and municipal infrastructure, supporting improved service delivery, sustainability, and capacity building. Canada works with the World Bank around a G-20-led agenda for infrastructure development in emerging markets, and is a contributing member of the World Bank-led Global Infrastructure Facility, which supports governments in bringing infrastructure projects to the market in order to attract private investors.

During the extensive consultations towards the development of the Canada Infrastructure Bank, officials from INFC and Finance Canada met with World Bank Group officials in January 2017. World Bank Group officials provided advice to Canadian officials based on World Bank Group's experience in financing infrastructure throughout the world and in helping to establish new infrastructure authorities.

The World Bank has indicated that it views the Canada Infrastructure Bank as a model that could potentially serve as a best practice for replication in other countries. This is similar to Canada's P3 framework, which is used by World Bank staff as an example with borrowing countries.

The International Finance Corporation (IFC), which is the World Bank Group's private sector financing arm, finances clean and efficient energy, including renewable power, in emerging markets where these sectors need international investment to be viable. The IFC provides equity and debt financing for projects, including early-stage initiatives, and mobilizes additional funding from commercial banks and other partners through its syndication programs. Of note, Canada and the IFC have jointly administered the Canada Climate Change Program over the past five years, which has advanced the concept of determining the "minimum concessionality" required to induce private sector actors to undertake investments that would otherwise not be commercially viable. This same concept will underpin the work of the Canada Infrastructure Bank.

*Previous Meetings with the World Bank Group*

You have met a number of times with senior officials from the World Bank, including most recently, a meeting with President Jim Kim in March 2017. Your predecessor met with Joaquim Levy, Managing Director and Chief Financial Officer of the World Bank, and provided the World Bank with an update on the progress of, and latest thinking, around the Canada Infrastructure Bank.

**Points to Register**

- Infrastructure Canada continues to be interested in involving the private sector in financing and funding infrastructure, including through Canada's robust PPP market and the newly established Canada Infrastructure Bank.

- The Canada Infrastructure Bank will use federal support to attract private sector and institutional investment to new revenue-generating infrastructure projects that are in the public interest.

- With respect to projects, the Government of Canada will set high-level policy and investment priorities ex ante; the Bank's mandate will be to structure, negotiate, and deliver federal support for projects–acting as a sophisticated counterparty similar to other private and institutional investors.

2

- The Bank would not crowd out private investment by investing in projects that are commercially viable without federal support, nor would it invest in projects that are so far from commercial viability that the project would be more appropriate for traditional funding mechanisms.

- We thank the World Bank for our discussions to date during the development of the Canada Infrastructure Bank, and we look forward to continued dialogue.

**Annex A – Biography**

3

## KRISTALINA GEORGIEVA
## CHIEF EXECUTIVE OFFICER, WORLD BANK

Kristalina Georgieva is the Chief Executive Officer for the World Bank.

As the Chief Executive Officer for the International Bank for Reconstruction and Development and the International Development Association, the World Bank's lending arms for middle-income and poor countries, Georgieva will build support across the international community to help mobilize resources and develop more effective solutions for the poor at the scale required.

Previously, Georgieva, a Bulgarian national, helped shape the agenda of the European Union since 2010, first as Commissioner for International Cooperation, Humanitarian Aid and Crisis Response, where she managed one of the world's largest humanitarian aid budget and established herself as a global champion for resilience.

As the European Commission Vice-President for Budget and Human Resources, Georgieva was in charge of the European Union's €161 billion (US $175bn) budget and 33,000 staff across its institutions around the world. She tripled funding available to the refugee crisis in Europe and drove rapid progress towards achieving a target of 40 percent women in management by 2019 in order to improve the Commission's gender balance.

Georgieva is widely respected for her efforts to mobilize the international community to find innovative solutions to today's complex challenges. As the co-chair of the United Nations Secretary-General's High-Level Panel on Humanitarian Financing, she secured the adoption of a much more effective system to meet the needs of record numbers of vulnerable people.

Before joining the European Commission, Georgieva held multiple positions at the World Bank. In her most recent role as the Vice-President and Corporate Secretary (2008-2010), she was the interlocutor between the World Bank Group's senior management, its Board of Directors and its shareholder countries. In the wake of the 2008 international financial crisis, she played a key role in the World Bank's governance reform and accompanying capital increase.

From 2007 to 2008, Georgieva was Director for Sustainable Development in charge of policy and lending operations in infrastructure, urban development, agriculture, environment and social development, including support to fragile and conflict-affected countries. In this role, she oversaw around 60 percent of lending operations of the World Bank Group.

Prior to that, in 2004, Georgieva was made World Bank Director for the Russian Federation, based in Moscow. Then she became Director in charge of the World Bank environmental strategy, policies and lending. Following that assignment, she became Director for Environment and Social Development for the East Asia and Pacific Region. Georgieva started working at the World Bank in 1993 as an Environmental Economist.

Kristalina Georgieva was born in Sofia, Bulgaria, in 1953. She holds a Ph.D in Economic Science and a M.A. in Political Economy and Sociology from the University of National and World Economy, where she was an Associate Professor between 1977 and 1991.

4

Infrastructure
Canada

**PROTECTED**

Ottawa, Canada
K1P 0B6

## BRIEFING NOTE TO THE DEPUTY MINISTER

### FOR YOUR APPROVAL: SMART CITIES CHALLENGE PERFORMANCE MEASUREMENT STRATEGY

(For Signature)

### ISSUE

- Your approval of the Smart Cities Challenge Performance Measurement Strategy (PMS) is sought by October 24, 2017 ▮▮▮▮▮▮▮▮▮▮

- The purpose of this note is to remind you of the objectives of the PMS outlined in the information package submitted on September 29, 2017. It also provides you with an overview of the internal consultations and indications of next steps.

### BACKGROUND

- The PMS is an internal document providing a framework for measuring progress and demonstrating results of the Smart Cities Challenge for Canadians. The PMS contains detailed information on the Smart Cities Challenge intents, data collection and evaluation strategies. The requirement to conduct a PMS stems from the Treasury Board's *Directive on Results* which requires Deputy Heads to establish and maintain robust performance measurement functions in their organizations. The document is to be kept evergreen by program officials to ensure it reflects the evolution of the program. The PMS will be used in the development of the Performance Information Profile as required by INFC Departmental Results Frameworks.

- The Directive also requires that Treasury Board submissions be supported by adequate performance measurement and evaluation information. In practice, this requirement is met by the approval of the PMS in advance of the Treasury Board date. If unmet, this can lead to burdensome conditioning by Treasury Board as the PMS will be required to secure the President's approval.

▮▮▮▮▮▮▮▮▮▮ The PMS benefitted from the advice of: 1) the Corporate Secretariat's Integrated Risk Planning and Performance Unit; 2) the Strategic Policy and Priority Initiatives' Results and Delivery team, 3) the Office of Audit and Evaluation; and, 4) the Program Operation's Branch's Program Integration team.
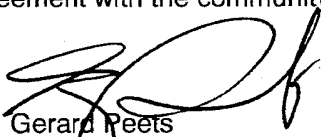
1

Canada

ATIA - 21(1)(b)
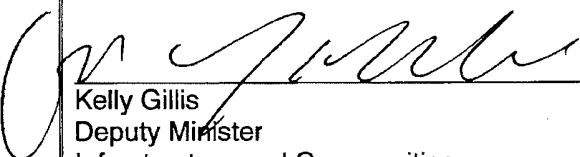ATIA - 69(1)(g) - (a)
ATIA - 69(1)(g) - (c)

**PROTECTED**

███████████████████████████████████████████

## NEXT STEPS

- Your approval of the attached PMS is required ████████████████████████
  ████████████████████████████████████ I am available to
  discuss the attached at your convenience.
- The contents of the PMS will continue to be updated to reflect progress in the Smart Cities
  Challenge's implementation. The next important milestones for updating the PMS are
  expected to be the close of the initial application stage scheduled at the end of April 2018
  and the conclusion of a contribution agreement with the community support partner
  expected in May 2018.
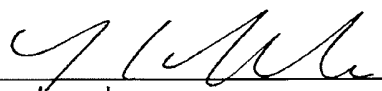
Gerard Peets
Director General
Smart Cities Challenge Directorate

---

I have reviewed the attached Performance Measurement Strategy for the Smart Cities
Challenge Directorate and consider that it represents an adequate plan to measure program
outcomes. Therefore,

___✓ I approve.          ___ I do not approve.          ___ For discussion.

OCT 2 4 2017

Kelly Gillis                                             Date
Deputy Minister
Infrastructure and Communities

or

OCT 2 4 2017

Yazmine Laroche                                         Date
Associate Deputy Minister
Infrastructure and Communities

---

Attachment: Smart Cities Challenge Performance Measurement Strategy

2

October 20, 2017

## 1.0 Program Overview

### 1.1 Overall purpose and objectives

The Smart Cities Challenges is part of a number of policy innovation initiatives announced in Budget 2017 to rely on challenge-based approaches, to solve big challenges facing Canadians and their communities. The Smart Cities Challenge is advanced by INFC under the auspices of the Privy Council Office's Impact Canada Initiative (ICI).

Specifically, the Smart Cities Challenge will allocate its budget of $300 million over 10 years, starting in 2017-18, to encourage communities of all sizes from across the country take bold action to improve outcomes for their residents by applying a smart cities approach that leverages connected technologies and data. The Challenge model incents communities to adopt a multi-sectoral approach to problem solving. The process requires the full engagement of residents, while requiring that communities mobilize themselves to overcome historic institutional barriers to innovation.

### 1.2 Design, Delivery and Implementation

INFC's Smart Cities Challenge is comprised of two strands of program activities. The first strand is the running of a competitive, pan-Canadian process (e.g. Challenge Rounds) by INFC to select through a jury-led process the winners of ████████████████████ The Smart Cities Challenge Rounds will incentivize communities to mobilize around a compelling challenge that they will define by engaging their citizens. For the purpose of the Challenge, smart cities approaches are defined as those that achieve meaningful outcomes for residents through the use of connected technologies and data.

████████████████████████████████████████████████

████████████████████████ support of the goals of increasing communities' capacity to innovate, building meaningful cross-sector partnerships, achieving positive outcomes at the community level, and enabling the scale up and replication of successful projects and approaches. The program will be announced in Fall 2017 and application information will be made available online on the ICI Challenge Platform portal. Through the program's lifespan, engaging and upbeat communications event will be held to promote the Challenge and its supported projects and build excitement among the general public for smart city approaches.

### 1.3 Eligible Recipients

The following entities can apply for the Smart Cities Challenge: municipalities (local, or regional governments established by or under provincial or territorial statute) and Indigenous communities (First Nations, Métis and Inuit). To be inclusive of all Indigenous communities regardless of their legal form, the Indigenous communities are defined as 1) a band council within the meaning of section 2 of the *Indian Act;2) a* First Nation, Inuit or Métis government or authority established pursuant to a Self-Government Agreement or a Comprehensive Land Claim Agreement between Her Majesty the Queen in right of Canada and an Indigenous people of Canada that has been approved, given effect and declared valid by federal legislation; 3) a First Nation, Inuit or Métis government that is established by or under

October 20, 2017

legislation, whether federal or provincial, which incorporates a governance structure; 4) other indigenous groups and organisations acting on their behalf (e.g., non-affiliated urban indigenous groups, non-status first nations and communities of the Métis Nation). Applicants are eligible insofar as they represent an identifiable community and are responsible for services in that community. A combination of organizations listed above can also apply for prizes.

### *1.4 Financial contributions*
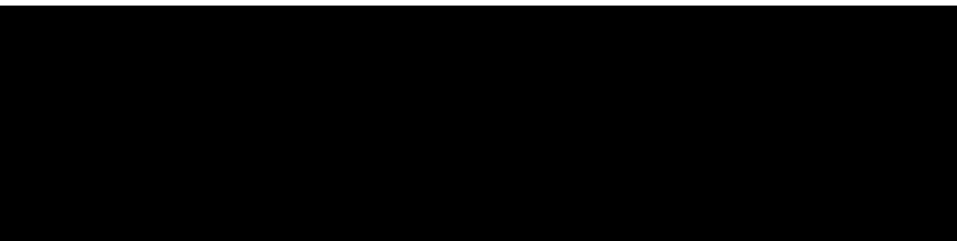
## 2.0 Need for the Program

### *Context*

In the 2016 Fall Economic Statement, the government announced its intent to launch the Smart Cities Challenge to accelerate the planning and adoption of innovative urban infrastructure. Participants will create ambitious plans to improve the quality of life for urban residents, through better city planning and implementation of clean, digitally connected technology.

Budget 2017 reemphasized this intent by committing to take more innovative approaches to solving some of Canada's biggest challenges and pursuing experimental programming to improve results. Consequently, INFC is launching the Smart Cities Challenge (the Challenge) under the auspices of the Privy Council Office's Impact Canada Initiative (ICI). The ICI was created in part in response to the recommendation of the Minister of Finance's Advisory Council on Economic Growth recommendation to rely on challenged-based or outcomes-based funding models to foster cross-sectoral collaboration and reward results. The ICI also fulfills the President of the Treasury Board's mandate to devote a fixed percentage of government program funds to experimentation.

To that end, the Smart Cities Challenge's funding of $300 million represents a very small portion of the $81 billion allocated for the Investing in Canada Plan but consists of a very significant departure from current INFC practices. At present, federal funding for infrastructure is predominantly allocated through bilateral agreements with provinces and territories based on allocation formulas or through smaller capacity-building programming delivered through the Federation of Canadian Municipalities. Through the Challenge's rollout, INFC will be experimenting with more hands on program delivery mechanism. This experience is expected to loop back into broader INFC programming in the form of lessons learned and new policy best practices helping to increase the overall impacts of its program interventions. INFC's work is launching at a time of renewed emphasis on the need for government intervention to deliver measurable results for Canadians.

The next sections are devoted to demonstrating the appropriateness of the Smart Cities Challenge as a vehicle to drive policy innovation and resolve challenges in a manner that delivers meaningful impacts for communities and their residents.

### Rationale

Canadian communities are evolving in a rapidly shifting landscape. In addition to the day-to-day imperative of keeping infrastructure and the services they support running smoothly, local governments are called upon to respond to an increasingly diverse range of social, environmental and economic issues. For example, with two-third of population growth in Canadian mid-sized to large cities attributable to international migration[2], local governments play an increasing role in the integration of migrants and refugees. Further, Canadian cities emit 42 per cent of Canada's GHG emissions according to the Stockholm Environment Institute[3], making communities key players in the pursuit of Canada's climate change goals. As in many industrialized countries, the drivers of economic development are increasingly community-based with quality of life becoming increasingly important to attract the highly-qualified human capital required to power modern industry.

New technologies have high potential to contribute to addressing these socioeconomic and environmental issues in an impactful manner. Technologies have also heightened residents' expectations, pressing communities to adopt new ways of interacting with citizens (e-participation), improve mobility (e.g.: automated vehicles for last mile transportation) and sustainability. For local governments these new technologies bring added complexity in their day-to-day operations but also tremendous opportunity.

Despite the wide range of application and high-potential to improve the efficiency of municipal infrastructure and services, the deployment of smart cities approaches by communities remains in the early stages. Financial barriers are commonly reported as hindering the deployment of smart city projects in communities. That said, a survey of smart cities initiatives in the European Union indicated that almost all projects were expected to recover their costs in the short to medium term[4] indicating that financial hurdles can be greatly minimized by adequate planning.

That said, the capacity for appropriate smart city planning is lacking in many communities. According to a survey by Cisco, common hurdles to the rollout of smart cities approaches include the lack of clarity on the benefits of smart city technologies. Many communities are unable to forecast project results and assess the costs and benefits (e.g., the return) of their investments. This ability is further hampered by the lack of coordination and collaboration among city stakeholders and conflicting community priorities which limits the capacity of communities to innovate.

The Smart Cities Challenge Rounds are designed to incent communities to mobilize their residents, internal resources and seek external partners around a shared challenge to overcome barriers to innovation. The Challenge model incents communities to adopt a multi-sectoral approach and seek the full engagement of their residents, key success factors in many smart city projects[5], towards solving their community's challenges. Core design features of the challenge rounds are intend to incent communities to adopt behaviours that are key for an institution such as a local government to increase its ability to innovate.

---

[2] https://www.policyschool.ca/wp-content/uploads/2017/05/Mid-Sized-Cities-Tassonyi.pdf

[3] https://www.sei-international.org/mediamanager/documents/Publications/Climate/Cities-low-carbon-future-2015-Canada-briefing.pdf

[4] http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/507480/IPOL-ITRE_ET(2014)507480_EN.pdf
p.11

[5] *Idem*

The Smart Cities Challenge is modelled after the United States' Department of Transportation Smart Cities Challenge which tasked cities to develop Smart cities Plans in partnership with local governments, citizens, businesses and civil society. The United States' experience has indicated that for communities to fully benefit from the Challenge's experience and develop implementable projects that capacity building assistance was hugely beneficial.

### 2.1 Alignment with government priorities

The program funding complements existing departmental programming, helping Canadians benefit from world-class, modern public infrastructure, with a specific emphasis on improving the quality of lives in our communities through the novel application of technology and the leveraging of data.

The Challenge complements other Government of Canada initiatives. By incenting the use of innovative approaches in communities, the Challenge will be aligned with the goals of the Innovation and Skills Plan announced in Budget 2017 as it will increase the market demand for cutting-edge technologies. It is expected that projects will come forward that will have positive environmental benefits, helping reduce GHG emissions in Canadian communities, in alignment with the Pan-Canadian Framework.

### 2.2 Target population

Communities of all sizes across all Canadian regions, including First Nations, Inuit and Métis communities, are the target population for the activities contemplated by the program.

### 2.3 Stakeholders

The primary stakeholders of the Smart Cities Challenge are communities that either compete directly in the challenge rounds or
Other stakeholders are organizations such as provinces and territories, public utility service providers, firms, not-for-profits, research and community organizations involved in projects as indirect stakeholders.

*2.4 Governance*

INFC's Smart Cities Challenge Directorate has overall responsibility for the Smart Cities Challenge's delivery and will engage in three different types of agreements under the Challenge's auspices: 1) granting agreements with the finalists, 2) contribution agreements with the winners and 3) ███████████████

INFC will require an oversight committee (OC) for each contribution agreement with winning communities, co-chaired by federal and winning project officials, █████████████████ ███████████ to monitor and assess compliance with the contribution agreement's objectives. Prior to entering in contribution agreements with winning communities, INFC will perform a risk assessment which will also lead to the development of risk mitigation measures included in the oversight and control mechanisms in the contribution agreement and the Oversight Committee.

The adjudication of the Challenge rounds and selection of projects will be done by a jury under guidance provided by the Minister of Infrastructure and Communities. ████████████████████

*2.5 Resources*

To support delivery of the Smart Cities Challenge, INFC is seeking new funding████████████
████████████████████ The remaining funding is to be provided as Grants and Contributions funding as stated above in the financial contributions section. A funding table provided on the next page outlines the program requirements. The complete funding profile for the Smart Cities Challenge is available in the "additional information section of this document.

## 3.0 Performance Measurement Framework

This section presents the results narrative of the Smart Cities Challenge on which the performance measurement framework and the logic model in the additional information section is built. The narrative below describes the program theory, the relationships between each program components and the identification of possible risk factors that could influence the program's ability to achieve its expected outcomes. The logic model itself is presented following the narrative.

*3.1 Results model narrative*

A graphic representation of the Smart Cities Challenge logic model is provided in the additional information section.

*3.2 Program theory*

The program theory for the Smart Cities Challenge program is based on INFC launching three pan-Canadian competitions incenting Canadian communities of all sizes to engage with residents and

ATIA - 18(b)
ATIA - 21(1)(a)
ATIA - 69(1)(g) - (a)

stakeholders to develop compelling smart city proposals. █████████████████

██████████████████████████████████ Participation in Challenge rounds will make communities acquire new behaviours with respect to project planning, partnership building, and experimentation such as pilots and trials, thereby increasing their institutional capacity to innovate.

Through the Challenge rounds, the selection of projects which are truly exemplary, innovative and whose impact is transformative will lead to measurable and measured positive outcomes for communities. Experience with these projects will be amplified through engaging communications by INFC and ██████████████ with the view to elevate the profile of the winning projects and inspire other communities to replicate and scale-up their successes.

███████████████████████████████████████████
███████████████████████████████████████████
███████████████████████████████████████████

### 3.3 External risk factors that may affect program success

███████████████████████████████████████████
███████████████████████████████████████████
███████████████████████████████████████████

### 3.4 Activities and outputs

**Inputs:** The Smart Cities Challenge will be equipped with the following inputs: 1) staffing; 2) funding; 3) IT platforms; and 4) partnerships █████████████████ experts and a jury. The Smart Cities Challenge and its partners will carry out the following main activities:

**Activities & Outputs**

*Program promotion:* The program will be announced through a high-profile launch event in Fall 2017. Program information such as the applicant guide containing all Challenge requirements and eligibility rules will be released simultaneously. In anticipation of the launch, INFC officials have undertaken consultations and outreach in all regions of Canada to drum up interest for the program. Several communications events are planned post-launch to maintain a high profile for the Challenge and provide visibility for the successful projects.

*Challenge Rounds Process:* Eligible recipients are Canadian communities[6]. Formal applications will be submitted by applicants through the IT platform at the initial and final intakes of the Challenge rounds. Projects submitted must meet broad eligibility parameters and their qualitative merits will be assessed on the basis of the publicly available criteria by INFC staff, experts and the jury. Ultimately successful applications will be those which, based on the above-noted criteria, can most meaningfully advance program objectives[7].

*Grants and community support:* ▮▮▮▮ finalist communities will receive grants of up to ▮▮▮▮ to further develop, plan and undertake training or other forms of experimentation in anticipation for the Challenge rounds final intake and implementation (if successful). Finalists will also have access to the activities and the advisory services of ▮▮▮▮▮▮▮▮▮▮ described below.

*Contribution agreements towards project delivery:* The winning communities will undertake the funded projects which will involve achieving important outcomes for their communities through the deployment of connected technology and data. Outcomes are expected to further the advancement of the Investing in Canada's Result and Delivery Charter objectives. It is expected that community engagement and partnerships formed during the Challenge rounds would be sustained to support the successful implementation of projects through in-kind and financial support. Communities will measure the effectiveness of projects vis-à-vis their intended outcomes by comparing progress to a baseline established at the project's onset. Under the terms of the contribution agreements, disbursement will be contingent on the achievement of milestones towards outcomes.

*Program management:* Finalist and winning communities must possess the capability to monitor, measure and report on the success of their project in order to secure payments under the outcomes-based contribution agreements. All recipients of funding will carry out the required reporting on

---

[6]Municipalities and local or regional governments established by or under provincial or territorial statute and all forms of indigenous communities (First Nations, Inuit or Métis) provided that applicants represent an identifiable community and are responsible for the provision of services in that community.

[7] Program objectives are 1) to improve institutional capacity to innovate, 2) the creation of multi-stakeholders and partnerships and networks; 3) to achieve measurable outcomes for communities and 4) promote the replicability and scalability of successful approaches.

activities, outputs and outcomes as specified in their contribution agreements. █████████████
████████████████████████████████████████████████████████

### 3.5 Immediate outcomes

*The first Smart Cities Challenge Round is launching and communities of all sizes across all regions of Canada are preparing project applications.* At this stage, it is expected that applicants are beginning to engage and consult with their residents on their projects and are beginning to form multi-stakeholder partnerships to advance project definition and ultimately implementation. This process is expected to be repeated twice more for Round 2 and Round 3. Through the three rounds, INFC will accumulate information about community priorities and capabilities through administrative data collected in Challenge applications. ████████████████████████████████████████████
████████████████████████████████████████████████████████
████████████████████████████████████████████████████████

### 3.6 Intermediate outcomes

*Winning projects under the Smart Cities Challenge begin to be implemented under the terms of outcomes-based contribution agreements.* Projects from all rounds are being implemented with the involvement of their multi-stakeholder partners. Communities gather early indication of results through robust performance measurement methods enabling them to demonstrate progress vis-à-vis the baseline measured at the projects onset and trigger the disbursement of payments under the terms of outcomes-based contribution agreements. Course corrections are implemented as required to ensure success. Engaging communications will continue to raise awareness of project outcomes.

*Communities take part in networking and knowledge dissemination activities to share the lessons learned on successful smart city projects.* This sharing of lessons learned and information on what works will enable peer communities to increase their awareness of smart cities approaches benefits.

### 3.7 Ultimate outcomes

*Communities* ████████████████████████████████████████████████████
████████████████████ *exhibit increased capacity to innovate* as evidenced by greater emphasis on innovation in the composition of their workforces, activities and budgets. Improved capacity to plan innovation and measure the benefits of their investments in technologies leads communities which have been unsuccessful in the Challenge to implement their projects (or some aspects) regardless of being funded under the program.

*The impacts of projects implemented will deliver positive outcomes for communities in terms of improved economic opportunities, sustainability and inclusiveness of their communities.* Selected projects will advance a variety of community social, environmental and economic goals and improve communities' capacity to sustainably manage its infrastructure assets ██████████████████████████████
████████████████████████████████████████████████████████
████████████████████████████████████████████████████████
████████████████████████████████████████████████████████
████████████████████████████████████████████████████████

October 20, 2017

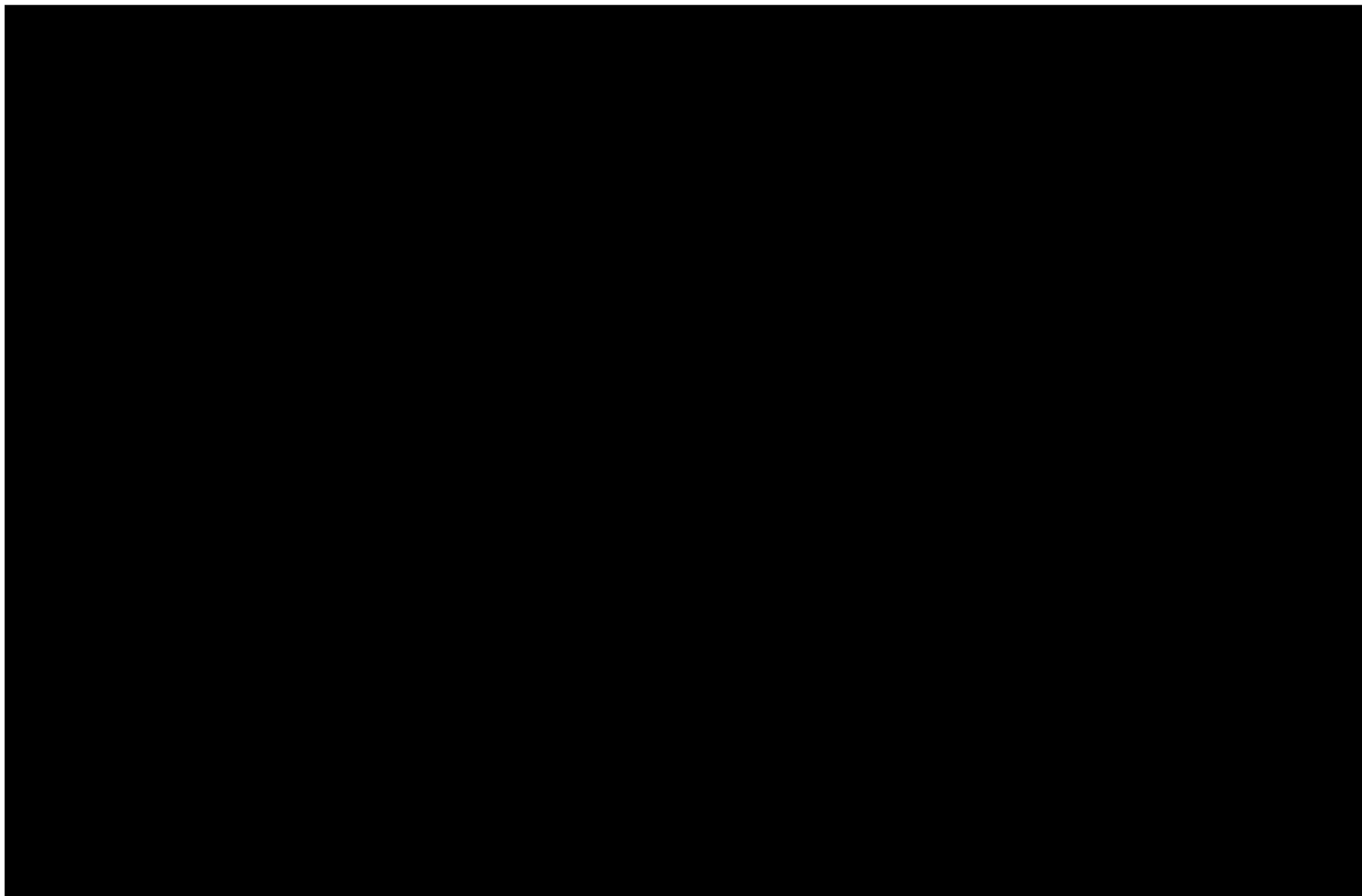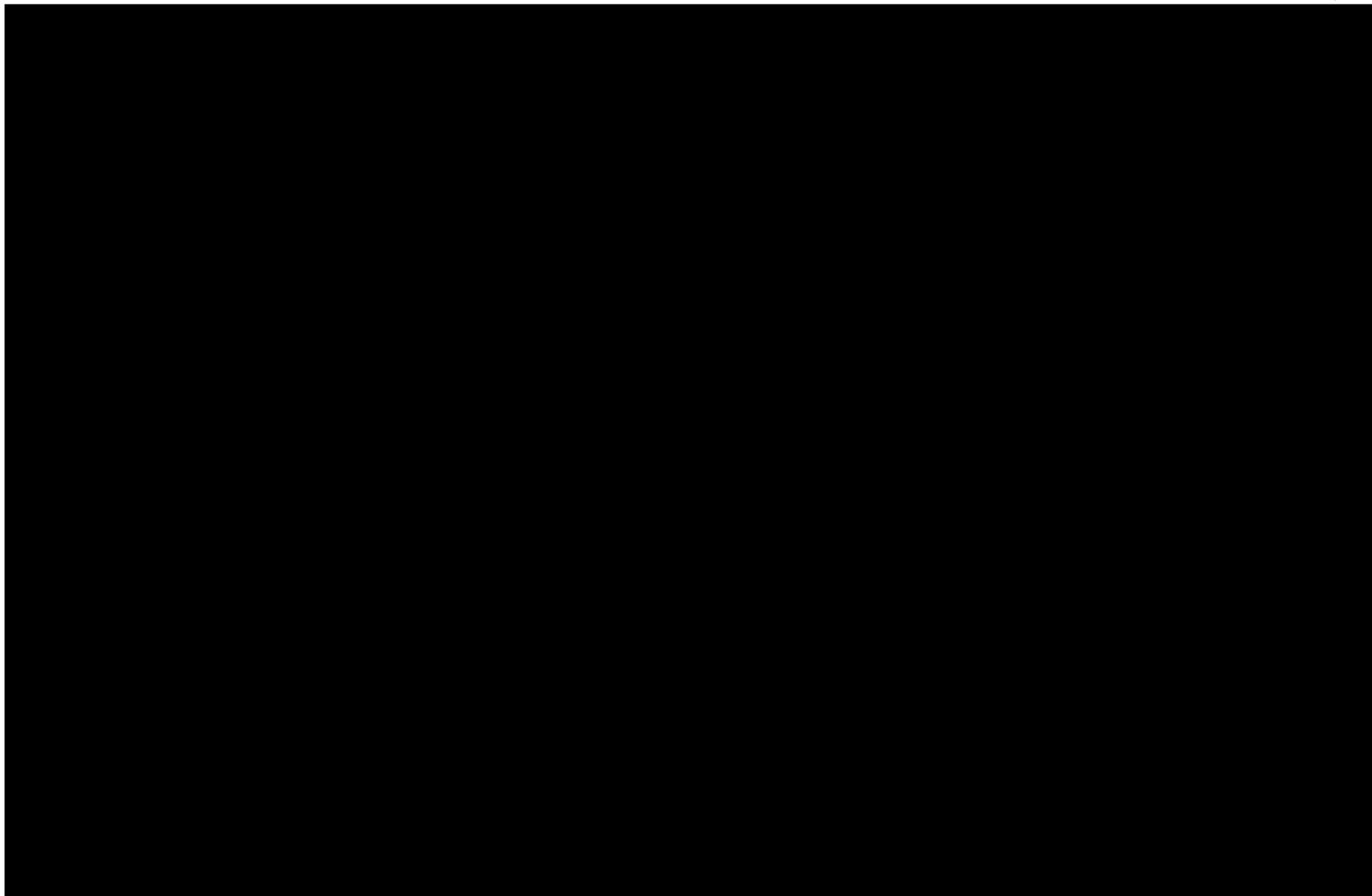Ultimately, the information gathered on community capacity and priorities as well as INFC's overall experience with the Smart Cities Challenge will lead to the mainstreaming of new best practices into INFC and ICI programming.
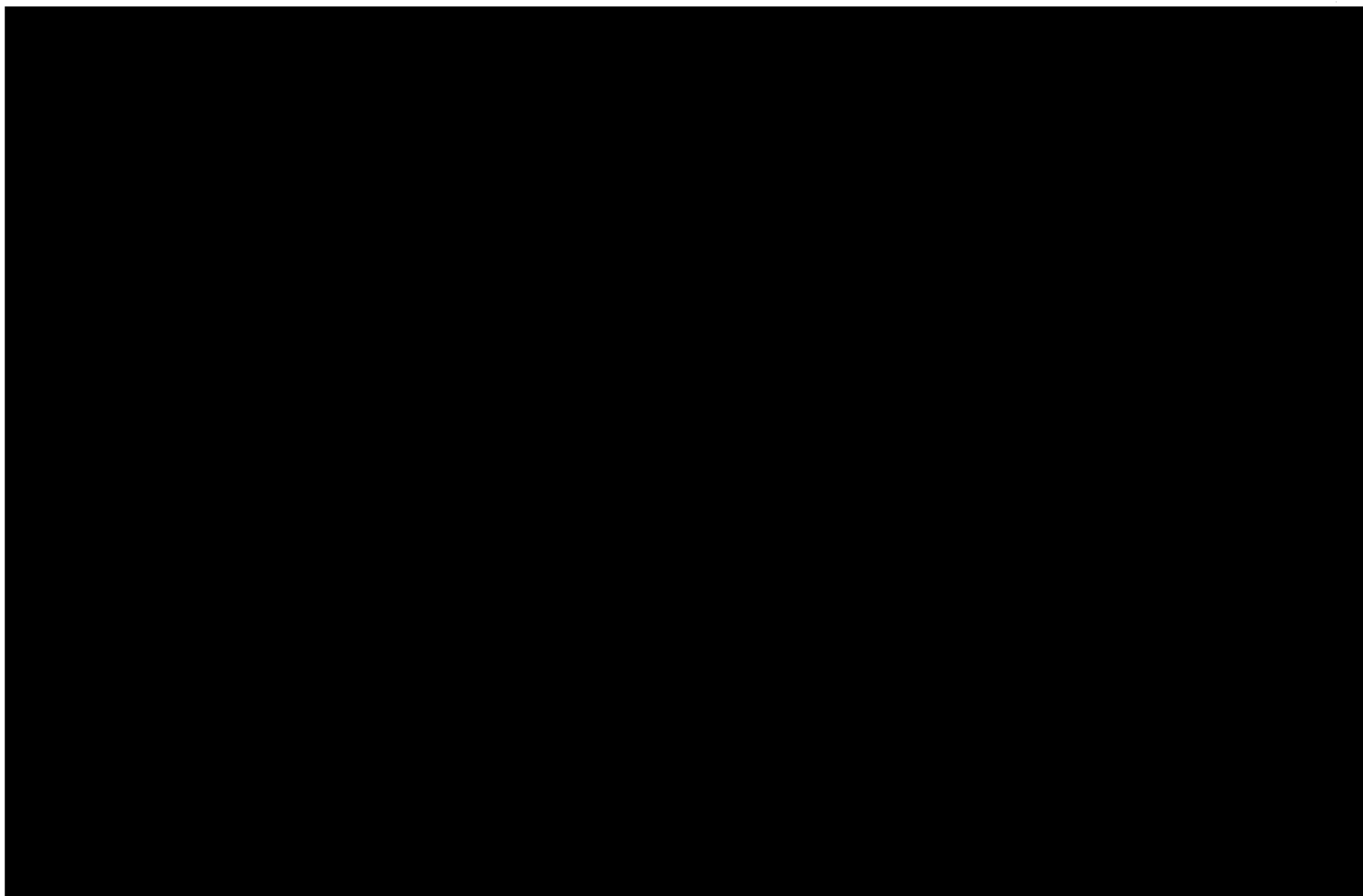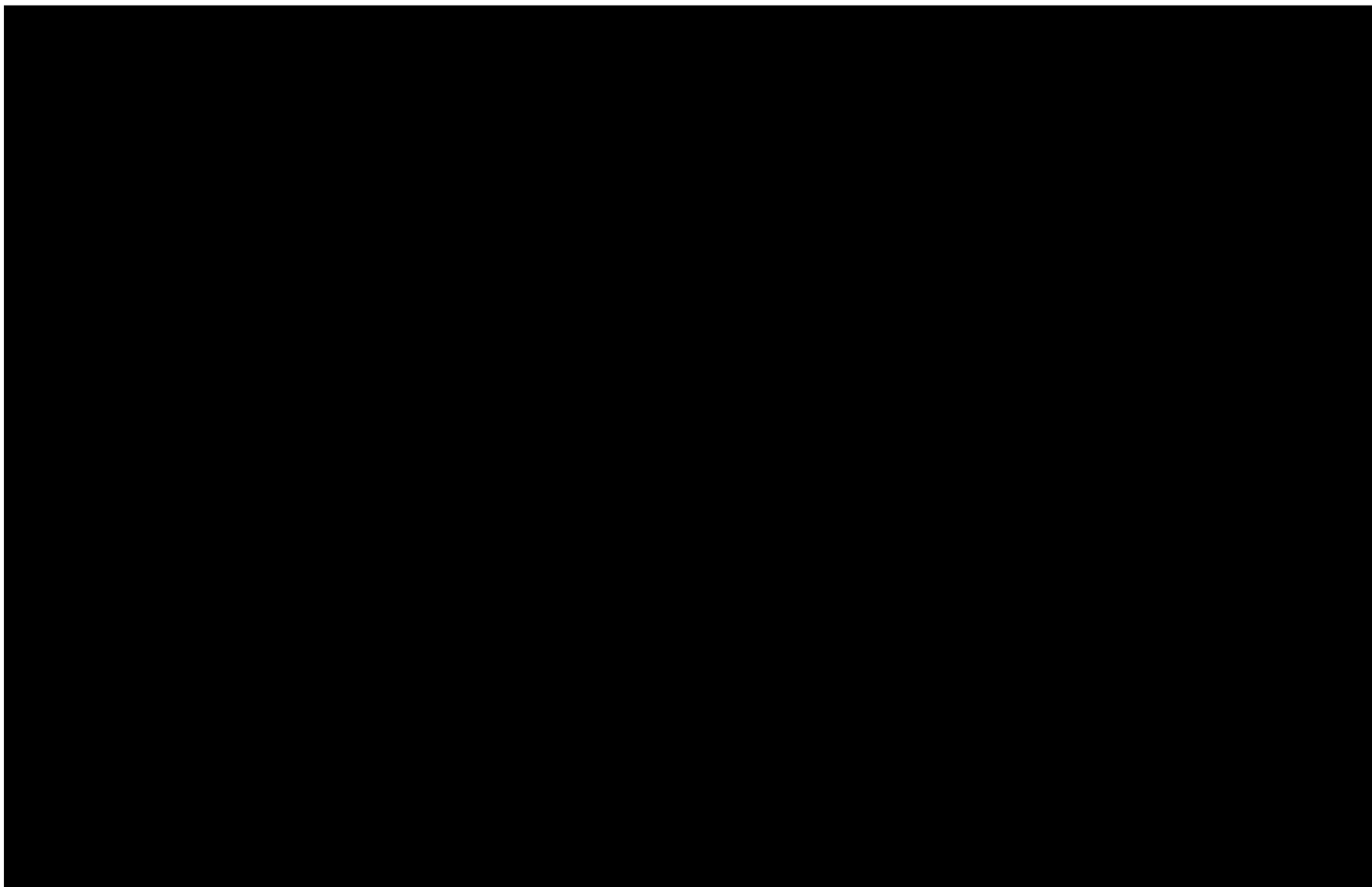
## 5.0 Evaluation Strategy

Infrastructure Canada develops a risk-based Integrated Audit and Evaluation plan (IAEP) which establishes the internal audit and evaluation on joint projects to be completed for a five-year period. The IAEP is developed in consultation with senior management and then presented to the Departmental Audit Committee (DAC) and the Performance Measurement and Evaluation Committee (PMEC) and approved by the Deputy Minister.

The IAEP for 2017-18 to 2021-22 includes a design and implementation evaluation of Smart Cities Challenge stream in 2020-21 to 2021-22 and would assess the need for and the performance of the design and delivery of the program, as well as the progress toward expected outcomes. As the Challenge is a merit-based program, this evaluation will focus on project selection criteria and processes in place to achieve expected results, including communication to the target audience. The evaluation will also assess whether lessons learned from past merit-based program evaluations (e.g., Green Infrastructure Fund) have been considered in the design and implementation of the Program.

That said, in view of the difficulty in forecasting project areas brought forward by proponents until the initial intake phase it is proposed that the evaluation strategy remains adaptive and cements its approach alongside baselining activities to ensure relevance of data points and general availability of data.

In accordance to best practices established by international organizations, the evaluation will combine a number of quantitative and qualitative methods (e.g. potentially case studies and indicator-based reviews) to complement the above methodology to provide a comprehensive understanding of program impacts for the public. This could involve relying on surveys and interviews with program stakeholders as they are generally used in program evaluation to provide additional context on a program's perceived relevance and performance by stakeholders.

## 6.0 Data Strategy

INFC Smart Cities Challenge Directorate will measure results primarily by levering data from project-level reporting and reporting from partners on the outcomes of their activities. Further data sets on the functioning of city systems will be created by the development and implementation of projects given the Challenge's emphasis on open data which could enable performance measurement.

The Smart Cities Challenge entails a high degree of contact with finalists and winners to help them in the development and implementation of their smart city projects. This will provide ample opportunities to access information, monitor projects, assess results and enable course corrections as required. As an information-intensive process, significant information can be leveraged from the benefit of other INFC programs as well as the ICI's operations.

The Smart Cities Challenge Directorate will provide data and results information on the Challenge for broader Investing in Canada Plan reporting on a quarterly basis to contribute to INFC's public reporting on the Plan as a whole.
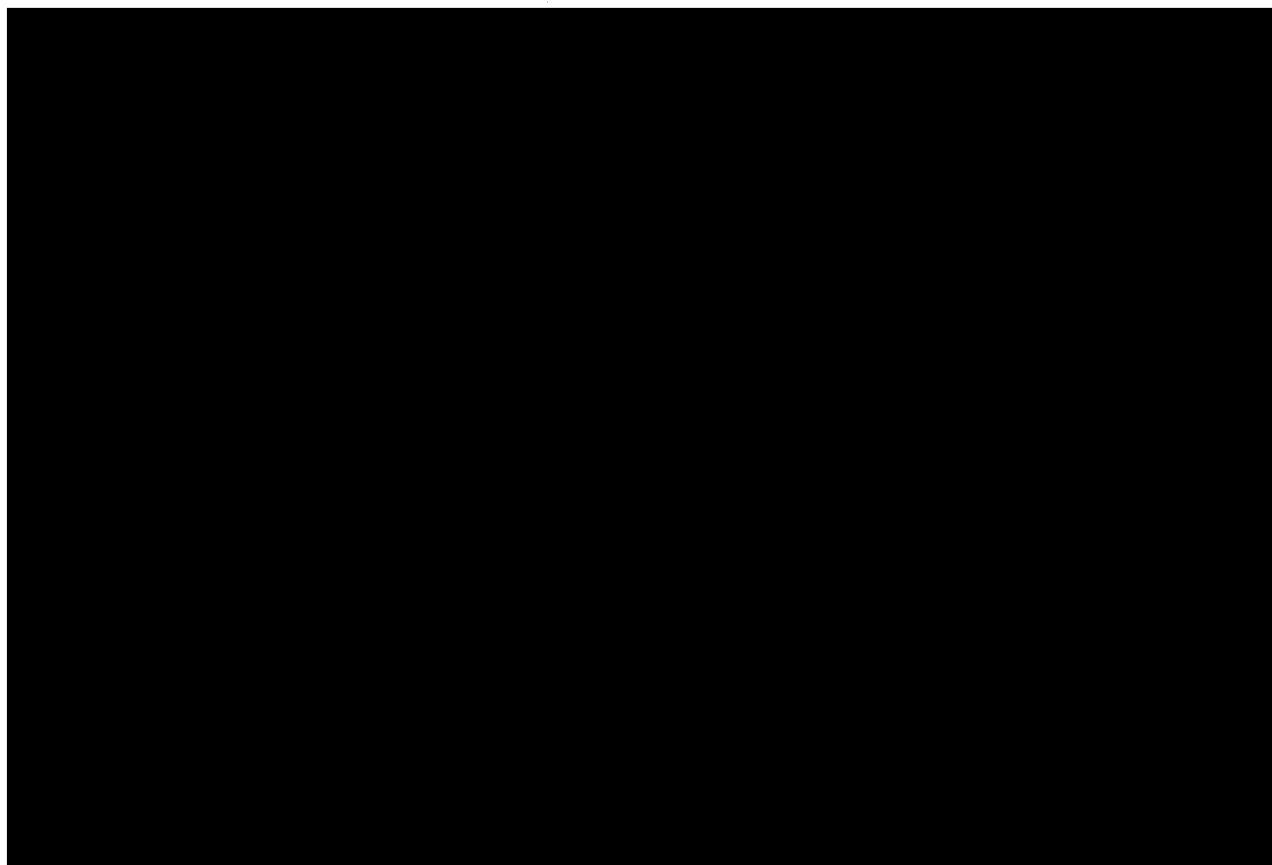
October 20, 2017

**Logic Model**

Inputs such as staffing, grants and contributions, IT platform, and partnerships will be used to support the following activities:

- Program promotion
- Launch and adjudication of Smart Cities Challenge Rounds;
- Project delivery and management: winning communities implement their projects through outcomes-based contribution agreements;
- ██████████████████████ capacity building though finalist grants.

**Input, activities, outputs**

Communities take part in the Challenge rounds, ██████████████████████ and engage with their residents to define project parameters and build excitement.

████████████████████████

**Immediate outcomes**

With ██████████████████ sustained community engagement, winning communities implement their projects through outcomes-based contribution agreements. Projects show early results.

Communities gain awareness of opportunities provided by smart cities approaches leading to replicability and scalability of projects.

**Intermediate outcomes**

Projects deliver outcomes in advancement of the Investing in Canada Results and Delivery Charter

Challenge's experience helps improve policymaking

Communities exhibit greater capacity to innovate.

████████████████

**Ultimate outcomes**